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09/992,625	11/06/2001	Michael A. Barrese	BARRESE 1-1-1-2	5807

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EXAMINER
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JAMAL, ALEXANDER

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PAPER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/992,625  
Filing Date: November 06, 2001  
Appellant(s): BARRESE ET AL.

\_\_\_\_\_  
John R. Brancolini  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5-8-2007 appealing from the Office action mailed 12-8-2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **1,3-6,8-13, 18-22**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Weston et al. (5799069), and further in view of Johnson (4008427) and further in view of Lui (6624635).

As per **claims 1,18,19,3**, Weston discloses a power supply comprising telephone line interface (contained within blocks 56,62,64 of Fig. 3)), a power supply converter 64. However, Weston does not specify a gyrator or an inductor in the circuit, or a PWM (comprising an oscillator and inductor), or a combiner to supplement the line power with a host (battery) power.

Johnson discloses a description of a pulse power supply that produces a regulated output for a large range of input voltages (Col 1 lines 1-35). Johnson's circuit (Fig. 1)

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comprises inductor 40 coupled to pulse circuit 32 (driven by oscillator 10), and outputting to converter 20. It would have been obvious to one of ordinary skill in the art at the time of this application to implement Johnson's PWM switching circuit as the power converter for the advantage that it can operate over a wide range of input voltages (such as the wide range of voltages seen on telephone lines).

Lui discloses a power supply for a subscriber terminal that comprises a combiner to supplement the line power if the line power falls to a certain level (Col 3 lines 35-64). He further discloses that the combiner may comprise a diode. This is the same method of 'supplementing' that is disclosed in appellant's 'combiner' 200 in appellant's Fig. 1. It would have been obvious to one of ordinary skill in the art at the time of this application to implement a combiner to make use of a host power source (battery) for the advantage of increasing the reliability of the system.

Weston's telephone line interface isolates and extracts both an information and power signal (Fig. 3, blocks 56,64). Examiner takes official notice that it is well known in the art to use gyrators in subscriber terminals for the purpose of isolating and extracting data and power signals. This is discussed in appellant's specification page 5 lines 16-22.

As per **claims 21,22**, claims rejected for the same reasons as the rejection of claim 18. The device of the rejection would perform the method of claims 21, 22.

As per **claims 4,20**, Liu discloses the use of a diode but does not specify that it is a Schottky diode. It would have been obvious to one of ordinary skill in the art at the time of this application to make a design choice regarding the type of diode used. Since Liu's device is used to provide DC voltage levels for Modem circuitry the voltage levels would be small, as such, when using a diode to combine the supplemental battery power, it would be obvious to choose one with a low voltage drop so that the supply voltage levels do not drop to unusable levels before the diode is forward biased.

As per **claim 5**, Weston's telephone line interface isolates and extracts both an information and power signal (Fig. 3, blocks 56,64). Examiner takes official notice that it is well known in the art to use polarity guards when interfacing with the phone line for the advantage of protecting against tip/ring reversal (unknown polarity) from the telephone line. This is disclosed as prior art in appellant's specification page 5 lines 10-15.

As per **claim 6**, Johnson discloses a startup circuit comprising blocks 30,34 and switch 36 (Fig. 1).

As per **claim 8**, Johnson discloses switches 14 and 16 (Fig. 1) located between the inductor and after the gyrator (the gyrator would be located at filter 30 when combined with the invention of Weston).

As per **claims 9,10**, Weston in view of Johnson discloses a divider 12 coupled to the oscillator 10 (JOHNSON: Fig. 1), a transformer 20 with a center tap coupled to

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inductor 40, a dual switches (with clamping circuits) 14 and 16, and a rectifier circuit coupled to the primary winding of the transformer (JOHNSON: Col 3 lines 3-22)

As per **claims 11,12**, the electrical device is a modem (Weston) with a rechargeable battery (Johnson, Fig. 1, capacitors 22 and 24).

As per **claim 13**, Johnson discloses that the oscillator frequency used to drive the pulse supply to pulse the inductor with current operates at 15KHz and 30KHz ... (approximately 500KHz).

**3. Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over Weston et al. (5799069) and Johnson (4008427) and Lui (6624635) as applied to claim 1, and further in view of Wakamatsu (5995381).

As per **claims 7**, Weston and Johnson disclose appellant's claim 1, but do not disclose an output shunt regulator on the PWM circuit.

Wakamatsu teaches that in PWM circuits, an output shunt regulator may be used to stabilize the output voltage with high precision (Col 8 lines 5-15). It would have been obvious to one of ordinary skill in the art at the time of this application to implement an output shunt regulator for the advantage of being able to stabilize the output voltage with high precision.

#### **(10) Response to Arguments**

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As per appellant's arguments that Weston does not disclose 'regulating' power supplied from a telephone line, examiner notes that appellant does not claim 'regulation' in the appealed claims. Appellant only claims (claim 1) a converter that produces line power (in the same manner as primary reference Weston discloses a power converter 64 to produce a voltage in Fig. 3). Examiner notes Weston Fig. 3 block 64 which shows a power converter that supplies a constant Vcc to power the device. Taking a variable amount of power from a telephone line (the power at the receiving end is unknown because the impedance of each particular telephone line is unknown) and converting it to a constant value that may be used by digital circuits in the device inherently requires 'regulation' ('control' or 'adjustment' as per the dictionary.com definition of regulate) for the purpose of creating the controlled voltage. As noted Weston only discloses the 'black box' 64 in Fig. 3 which performs the function of converting (via control or adjustment) the power from one form to another. Weston does not disclose the specific circuitry used to implement the conversion as there are many well known power converting (regulating) circuits that may be used.

Examiner does not understand appellant's statements that 'Weston seems to teach away from regulating the power drawn from the phone lines..', or that "Weston provides no motivation for regulating a constant power level" (pages 7 and 8 of appeal brief) as Weston clearly discloses the power converter block in Fig. 3. Examiner notes Weston Col 4 lines 50-60 that discloses the function of the converter is to produce an appropriate DC power supply voltage for the modem circuitry.

As per appellant's arguments of the lack of motivation to combine the teachings of Johnson with the device of Weston, examiner disagrees. Weston does not specify the exact



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implementation of the power converter. The motivation to look to Johnson for teaching is that Johnson discloses a specific implementation of a circuit to perform the conversion function **already disclosed** by Weston.

As per appellant's arguments that Lui does not teach a combiner to supplement the phone line power. Examiner repeats the language from the previously filed final rejection. Lui discloses a power supply for a subscriber terminal that comprises a combiner to supplement the line power if the line power falls to a certain level (Col 3 lines 35-64). He further discloses that the combiner may comprise a diode. This is the same method of 'supplementing' that is disclosed in appellant's 'combiner' 200 in appellant's Fig. 1. The cited portions of Lui disclose how the combination of voltage sources may be used. Examiner contends it would have been obvious to supplement the DC output disclosed by Weston with a host battery implemented with a combiner (diode implemented) in order to improve reliability in the system. Examiner notes that this is the same concept and implementation as disclosed in appellant's specification (pages 10 and 11).

As per appellant's arguments that the variable transfer speeds of Weston teach away from a motivation to provide an additional power supply as taught by Lui, examiner notes that the Vcc DC output taught by Weston is used to power modem circuitry. If the power from the telephone line is unable to produce the required DC supply voltage, then the modem circuitry will cease to function. Lui's teachings will provide improved reliability for situations such as these.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.



Respectfully submitted,

Alexander Jamal



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